

THE REMARKS

Applicant believes that entry of the above amendments and consideration of the following remarks will place this application into condition for allowance.

I. THE CLAIMS

Claims 1, 5 to 18 and 20 to 70 are presented for examination.

Independent Claim 1 has been limited to a method for inhibiting the growth of fungi on and in plant tissues using a synthetic auxin (indole-3-butyric acid) or its metabolites, precursors and/or derivatives. Support may be found in the specification, Example 1 and original Claims 7, 19 and 20. Because the limitation of original Claim 19 has been incorporated into amended Claim 1, original Claim 19 has been cancelled. Claim 5 has been amended to limit the auxin to indole-3-butyric acid. Claim 6 has been amended to provide that the synthetic auxin is applied in combination with indole-3-acetic acid. Support for these amendments may be found in the specification, Example 1 and original Claim 7.

Independent Claim 25 has been limited to a method for inhibiting the growth of fungi on and in plant tissues by applying a synthetic auxin or its precursor or conjugate to seeds, seed pieces or tubers for a plant prior to planting or to the roots, foliage, flowers or fruit of a plant after planting. Support may be found in the specification, Example 1 and original Claims 1, 19 and 20. Claim 26 has been amended to provide that the auxin is selected from a specified group of synthetic auxins. Support may be found in the specification and original Claim 5. Claim 27 has been amended to specify that the auxin is indole-3-butyric acid. Support may be found in the specification and original Claim 7.

Independent Claim 51 has been limited to the use of a synthetic auxin or its precursors or conjugates. Support may be found in the specification, Example 1 and original Claim 1. Claim 52 has been amended to provide that the auxin is selected from a specified group of synthetic auxins. Support may be found in the specification and original Claim 5. Claim 53 has been amended to specify that the auxin is indole-3-butyric acid. Support may be found in the specification and original Claim 7.

Independent Claim 54 has been amended to specify that the auxin comprises indole-3-butyric acid. Support may be found in the specification and original Claim 7. Claim 55 has been amended to state that the auxin further comprises indole-3-acetic acid. Support may be found in the specification, Example 1 and original Claim 55.

Independent Claim 60 has been limited to seeds and seed pieces having dispersed on the surface thereof an auxin selected from a specified group of auxins to inhibit the growth of fungi on the resulting plants. Support may be found in the specification, Example 1 and original Claim 1. Claim 61 now specifies that the auxin is indole-3-butyric acid. Support may be found in the specification and original Claim 7. Claim 66 has been amended to refer to specific families of fungi. Support may be found in the specification and in original Claim 20.

Independent Claim 68 has been limited to seeds and seed pieces having dispersed on the surface thereof an auxin selected from indole-3-butyric acid, indole-3-acetic acid and mixtures thereof to inhibit the growth of fungi on the resulting plants. Support may be found in the specification and Example 1. Claim 69 has been amended to provide for the further dispersal of cytokinin, gibberellic acid and their precursors on

the surface of the seeds or seed pieces. Support may be found in the specification, Example 1 and original Claim 69. Claim 70 has been amended to specify that the auxin comprises both indole-3-butyric acid and indole-3-acetic acid. Support may be found in the specification and Example 1.

II. THE INVENTION

Claims 1, 5 to 18 and 20 to 32 are directed to methods for inhibiting the growth of fungi on or in plant tissues by applying an auxin to seeds or tubers before planting or to roots, foliage, flowers or fruit of the plants after planting. Claims 1, 5 to 18 and 20 to 24 specify indole-3-butyric acid or its metabolites, precursors or derivatives, while Claims 25 to 32 merely specify an auxin or synthetic auxin. Claims 28 to 32 more specifically specify that the inhibited fungi is *Fusarium*. It is known from the prior art that such compounds may result in uncontrolled growth and death of plants. That knowledge forms the basis of several very effective commercial weed killers. Accordingly, in order to achieve the desired results, it is critical that the specified be applied in an amount effective to inhibit growth of harmful organisms causing the disease, but also in an amount insufficient to negatively effect growth of the plant tissues. That limitation is found in each of independent Claims 1, 25 and 28.

Claims 33 to 59 are directed to methods for inhibiting the infestation of plants by insects and their larvae by applying an auxin to specific plant parts after planting or to seeds or tubers before planting. Claims 51 to 53 limit the auxin to a synthetic auxin, while Claims 54 to 59 further limit the auxin to indole-3-butyric acid. Again, because such compounds may result in uncontrolled growth and death of plants, in order to achieve the desired results, it is critical that the auxin or plant growth

hormone be applied in an amount effective to inhibit infestation by the insects and their larvae, but also in an amount insufficient to negatively effect growth of the plant tissues. That limitation is found in each of the independent Claims 33, 51 and 54.

Finally, Claims 60 to 70 are directed to seeds, seed pieces and tubers that have been treated with an auxin (Claims 60 to 67) or indole-3-butryic acid, either alone or in combination with indole-3-acetic acid (Claims 68 to 70) to produce plants having enhanced resistance to fungi attack. Again, because such compounds may result in uncontrolled growth and death of plants, in order to achieve the desired results, it is critical that the auxin or plant growth hormone be present on the seed or seed piece in an amount effective to inhibit growth of harmful organisms, but also in an amount insufficient to negatively effect growth of the emerging plant tissues. That limitation is found in each of the independent Claims 60 and 68.

III. THE RESTRICTION REQUIREMENT

The Examiner has asserted that the claims pending in the captioned application are directed to two distinct inventions and, accordingly, has required that Applicant elect between those inventions. The Examiner has characterized those inventions as follows:

Invention I comprising Claims 1, 5-24, 28-50 and 60-67 drawn to (a) a method of inhibiting disease in a plant by applying an auxin to the plant seed or (b) a plant seed treated with the auxin and classified in class 504, subclass 100.

Invention II comprising Claims 25-27, 51-59 and 68-70 drawn to (a) a method of inhibiting disease in a plant by applying a plant growth hormone to the plant seed or (b) a plant seed treated with the plant growth hormone and classified in class 504, subclass 100.

The Examiner asserts that these inventions, while classified in the same class and subclass, are related as a combination and sub-combination which are independent and distinct and would require separate searches. The Examiner asserts, correctly, that compounds other than auxins can function as plant growth hormones. And the Examiner asserts that the sub-combination has separate utility, e.g., cell development. Thus, the Examiner concludes that restriction and election are proper.

The Examiner has also requested that Applicant elect a specifically named plant growth hormone or auxin and disease or disease organism for the elected group. Finally, the Examiner has requested that Applicant specifically name or define any additional ingredients within the invention.

IV. THE ELECTION

Applicant views the restriction requirement as directed to a genus (plant growth hormones) and a species (auxins) within that genus. Applicant has traversed the restriction requirement by the accompanying amendment of the claims.

Applicant, however, makes the following provisional election with traverse.

Applicant provisionally elects the invention of Group I, i.e., Claims 1, 5-24, 28-50 and 60-67 directed to methods employing an auxin to inhibit the growth of both

flora and fauna, e.g., fungi and insects/larvae, respectively, known to attack plant tissues.

Applicant, in the accompanying amendment has amended independent Claims 25, 51, 54 and 68, along with any appropriate dependent claims, to remove any references to plant growth hormones. After amendment, all of the claims of this application are all directed to methods using auxins and to plant seeds treated with auxins to inhibit the growth of fungi and insects/larvae known to attack plant tissues. Thus, Applicant asserts that the claims of Group II after amendment should be included within the invention of Group I.

Applicant requests that all of the claims now pending in the captioned application, i.e., Claims 1, 5 to 18, 20 to 70, are directed to a single invention and should remain in this application. The restriction requirement, having been traversed by the accompanying amendment, should be withdrawn. Having traversed the restriction requirement, Applicant requests that prosecution of all claims remaining after amendment proceed in this application.

To the extent required, Applicant further elects within the auxins, the synthetic auxin indole-3-butyric acid. Where appropriate Applicant has specified the inhibited plant disease organism to be fungi. Thus, Claims 1, 5 to 18, 20 to 70 are now directed to methods or treated seeds using an auxin (specifically indole-3-butyric acid in at least Claims 1, 5 to 8, 20 to 70) to provide plant tissues with improved protection against attack by fungi. Claims 33 to 59 are directed to methods using an auxin (preferably indole-3-butyric acid) to provide plant tissues with improved protection against attack by insects, particularly sucking and chewing insects, and their larvae..

Dependent claims provide for the use of metals, along with the specified auxins. See Claims 15 and 46 which define those metals as the alkaline earth metals, the transition metals and mixtures thereof. Claims 16 and 47 further specify the preferred metals to be calcium, zinc, copper, manganese and mixtures thereof.

V. THE PRIOR OFFICE ACTION

Applicant thanks the Examiner for the courtesies extended herein and for the withdrawal of the prior Office Action and its rejection of the claims over the cited Chinese reference.

VI. THE CONCLUSION

Having fully responded to the restriction and election requirement in the pending Office Action, Applicant requests that the restriction requirement be withdrawn and that prosecution of all the pending claims be concluded. None of the prior art previously cited by the Examiner or known to Applicant discloses or suggests the invention as now claimed. None of that prior art discloses or suggests (a) methods for protecting plant tissue from attack by fungi or insects/larvae by applying an effective amount of an auxin (preferably indole-3-butyric acid) to the seeds of the plant before planting or to the roots, foliage, flowers or fruit of the plant after planting or (b) seeds, seed pieces or tubers treated with such an auxin to provide the emerging plant with protection against attack by such pathogenic flora and fauna.

Having already overcome two rejections on the merits, Applicant believes that examination of the claims of this application should be concluded expeditiously and that a Notice of Allowance should promptly issue. Applicant, accordingly, requests that

all of the claims in the captioned application, i.e., Claims 1, 5 to 18 and 20 to 70, be promptly passed to issue.

No additional claims fees are required with this Response. However, the Commissioner is authorized to charge any fee which may be required with this Response to Deposit Account No. 19-2112. This authorization is made in duplicate in the accompanying letter.

If the Examiner believes that a telephone conference would expedite allowance, he is urged to contact the undersigned at (713) 227-8008.

Respectfully submitted,



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